

REMARKS

Claims 68-95 are pending in this application. Claims 68-95 are rejected.

Claims 68-73, 75, 76, 79, 84, 87, 88, and 90 are amended above. Claims 1-68 have previously been canceled without prejudice or disclaimer of the subject matter contained therein. Claim 89 is canceled above without prejudice or disclaimer of the subject matter contained therein.

Support for the above amendments appears throughout the originally filed specification, claims, and drawings. Specifically, support for the amendments to claim 68 can be found at least in the sentence bridging pages 3 and 5, the sentence bridging pages 6 and 7, and on page 9, lines 20-26 of the specification.

Applicant, by amending any claims herein, makes no admission as to the validity of any rejection made by the Examiner against any claim. Applicant reserves the right to reassert any of the claims canceled or the original claim scope of any claim amended herein, in a continuing application.

It is respectfully submitted that the above amendments to the claims introduce no new matter within the meaning of 35 U.S.C. §132. Accordingly, Applicant requests reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

I. Claim 68 stands rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Porat (US 7,089,876) as set forth on page 2 of the Official Action.

The Examiner asserts that "it is at least obvious if not inherent that the self-propelled cleaning robot of Porat '876 includes a controller in order to perform control functions of the assigned tasks autonomously or automatically, such as cleaning, positioning detection, battery charge level, avoiding collision with the pool walls, cleaning patterns, etc." This rejection is respectfully traversed.

"Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W.L. Gore & Assocs. V. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Further, "when evaluating the scope of a claim, every limitation in the claim must be considered. U.S.P.T.O. personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered." *U.S.P.T.O. Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, page 9, October 26, 2005. As the Federal Circuit stated, "[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)).

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat '876 discloses a floating platform 10 connected via power cable 90 to a pool cleaner 100 powered by a rechargeable battery 102, as shown in Fig. 1. See column 3, lines 43-67.

Porat '876 does **not** disclose a body unit with a main controller and a tail unit with a tail controller and being in communication with the main controller according to the claimed combination. Porat '876 does not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876 renders the subject matter of claim 68 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

II. Claims 69, 70, 72-78, 94, and 95 stand rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Porat (US 7,089,876) in view of Mileski et al. (US 6,525,762) and further in view of Abramson et al. (US 2003/0120389) as set forth on page 3 of the Official Action.

The Examiner asserts that "it would [be] obvious to a person having ordinary skill in the art to apply the teachings of Mileski et al.'s underwater video camera to a different electronic device such as a robotic pool cleaner that belongs to the kind of submersible electronic devices."

The Examiner further asserts that "it would have been obvious to one having ordinary skill in the art to provide Porat '876 system with the floating housing having and antenna as taught by Mileski et al. and the remote control as taught by Abramson et al., since such a combination will provide Porat '876 system the benefit of having capability of transmitting / receiving RF signals to / from an external user's platform for controlling/monitoring different tasks as claimed of the submersible electronic device (pool cleaner, video camera or the like) regardless its current position."

The Examiner even further asserts that "it would be obvious to one having ordinary skill to see that the floating device of Mileski et al. is obviously capable to go underwater to avoid possible entanglement or encounters with obstacles."

The Examiner in addition asserts that "it is at least obvious if not inherent (see figures 1, 2, & 4) that the battery from the robot on the bottom of the pool could have been charged by external power supply 4 via cable 92 and then cable 90. Notice the term power

input/output for the electrical ports on both the robot and the floating platform. This means that the ports could be configured to provide either power input or power output, to and from the device. Thus, it is clear that power input from an external source could be routed to the robot on the bottom of the pool via floating platform 10."

The Examiner also asserts that "it is obvious if not inherent (see figures 1, 2, and 4) that the battery on the bottom of the pool could be recharged from external power supply 4 via platform 10 (col. 5, line 64 to col. 6, line 2)." These rejections are all respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

It is pointed out that claims 69, 70, and 72-78 have been amended to depend directly or indirectly on independent claim 68.

Porat '876 has been discussed above in the response set forth in paragraph I above.

Mileski et al. disclose an underwater video system, including an underwater camera and housing 20 connect via a cable 28 to buoy 40, as shown in Figs. 1 and 2. See column 2, lines 10-37.

It is noted that **only** a video/audio signal is sent via cable 28 to buoy 40. Further, a diver manipulates the underwater camera as needed. See column 2, lines 37-42. It is further noted that the underwater camera and housing 20 is not wirelessly connected to the buoy 40, but instead is wired through the water via cable 28.

Abramson et al. disclose a robotic vacuum cleaner, including sensors 40 receiving signals, typically infrared (IR) light signals, for a remote controller 46, as shown in Fig. 1, or a coded transmitter 1300, as shown in Fig. 25. See paragraph [0049]. It is noted that this arrangement is only suitable for transmitting control signals through air and **not** water.

Porat '876, Mileski et al., and Abramson et al. do **not** disclose a body unit with a main controller and a tail unit with a tail controller and being in communication with the main controller according to the claimed combination set forth in independent claim 68 and depending claims 69, 70, and 72-78. Porat '876, Mileski et al., and Abramson et al. do not teach or suggest the claimed subject matter.

Further, regarding claims 94 and 95, the video camera in Mileski et al. is not wirelessly connected through the water to the buoy 40, but instead is wired to the buoy 40 via cable 28. Further, the video camera is not remotely controlled from the surface wirelessly or wired, but instead is manually manipulated by a diver. Even further, the infrared remote control arrangement disclosed by Abramson et al. will not transmit a control signal through water. Again, Porat '876, Mileski et al., and Abramson et al. do not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876, Mileski et al., and Abramson et al., taken alone or together, render the subject matter of these claims obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

III. Claims 79-81, and 84-87 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Porat (US 7,089,876), Mileski et al. (US 6,525,762), and Abramson et al. (US 2003/0120389) in view of Porat et al. (US. 6,842,931) as set forth on page 8 of the Official Action.

The Examiner asserts that "it would have been obvious to one having ordinary skill in the art to provide Porat '876/Mileski et al./Abramson et al.'s system with the teachings of Porat et al. '931, since such a combination will provide Porat '876/Mileski et al./Abramson et al.'s system the benefit of having capability of storing programmed movement based upon initial orientation of the cleaner."

The Examiner further asserts that "it would have been obvious to one having ordinary skill in the art to provide Porat '876/Mileski et al./Abramson et al.'s system with the teaching of Porat et al. '931, since such a combination will provide Porat '876/Mileski et al./Abramson et al.'s system the benefit of having capability of detecting the presence of the wall to perform the cleaning, reverse movements and turning without collision.

The Examiner even further asserts that "[It] would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the robot type of Porat '876/Mileski et al./Abramson et al. teaching, thereby maximize the capability of the robotic cleaner to cover the entire bottom surface of the pool to be cleaned, and programmed to direct the cleaner in a particularly efficient pattern of movements."

The Examiner also asserts that "[It] would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the robot type of Porat '876/Mileski et al./Abramson et al., with the robot type of Porat et al. '931, because this modification would have introduced a novel algorithm for scanning pattern, into Porat '876/Mileski et al./Abramson et al.'s teaching, thereby maximize the capability of the robotic cleaner to cover the entire bottom surface of the pool to be cleaned, and programmed to direct the cleaner in a particularly efficient pattern of movements. These rejections are all respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the

claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat '876, Mileski et al., and Abramson et al. have been discussed above in the response set forth in paragraphs I and II above.

Porat et al. '931 discloses in the Background of the Invention that "[It] is well known in the art to provide the pool cleaner with a pre-programmed microprocessor and electronic control device, which can include a controller and memory device that is wired to one or more electronic and/or electro-mechanical switches, sensors and the like, in order to insure that the pool cleaner follows a pattern of the pool. In some cases, the programmed movement is entirely random and can take account of pools of different sizes and shapes. Other pool cleaner control devices are based upon the initial orientation of the cleaner after it encounters a sidewall of a rectilinear pool having no obstacles or accessories that might

impede or trap the pool cleaner, or otherwise interfere with a regular transverse repetitive movement that is designed to pass the cleaner over the entire bottom surface of the pool.” See column 2, lines 1-18.

Porat et al. '931 also discloses turning the robot “through a predetermined angle 126 that is less than 180°, and preferably 90° for a rectilinear pool, and continuing to move it until it again encounters an upright wall 116, and then repeating those steps until the unit has encountered upright walls, e.g., 118, 112, 114, 118 a predetermined number of times, at which point the predetermined distance is changed e.g. to 130.” See discussion at column 7, line 21 thru column 8, line 20.

Claims 79-81 have been amended to now depend, directly or indirectly, on independent claim 68.

Porat '876, Mileski et al., Abramson et al., and Porat et al. '931 do **not** disclose a body unit with a main controller and a tail unit with a tail controller and being in communication with the main controller according to the claimed combination. Thus, Porat '876, Mileski et al., Abramson et al., and Porat et al. '931 do not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876, Mileski et al., Abramson et al., and Porat et al. '931, taken alone or together, render the subject matter of claims 79-81 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

Independent claim 84 has been amended to place this claim in independent form, and claim 85-87 depend, directly or indirectly, from independent claim 84.

Porat et al. '931 only disclose moving a pool cleaner in a parallel pathway, as shown in Fig. 5. Porat '876, Mileski et al., Abramson et al., and Porat et al. '931 do not disclose the robot "adapted to move along two known mutually angled directions independently of the shape of the swimming pool" according to the claimed combination. Porat '876, Mileski et al., Abramson et al., and Porat et al. '931 do not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876, Mileski et al., Abramson et al., and Porat et al. '931, taken alone or together, render the subject matter of claims 84-87 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

IV. Claim 82 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Porat (US 7,089,876), Mileski et al. (US 6,525,762), Abramson et al. (US 2003/0120389), and Porat et al. '931 in view of Hadari (US. 2004/0260428) as set forth on page 13 of the Official Action.

The Examiner asserts that "[It] would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the robot type of Porat '876/Mileski et al./Abramson et al./ Porat et al. '931's teaching, thereby improving the effectiveness and maneuverability of a robot for cleaning swimming pools. The modification provides Porat

'876/Mileski et al./Abramson et al./Porat et al. '931 with means for detecting wall obstruction for cleaning robot." This rejection is respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat '876, Mileski et al., and Abramson et al. have been discussed above in the responses set forth in paragraphs I and II above. **Porat et al. '931** has been discussed above in the response set forth in paragraph III above.

Hadari discloses "when the instantaneous current is more than 15% higher than the stored reference current, controller 40 issues a signal activating an indicator, e.g. a warning light, showing that the filter is partly clogged." See paragraph [0015].

Harari does **not** disclose a “first controller being adapted to detect the current through the drive means, wherein when the current exceeds a threshold, the controller assumes a wall impact to have occurred” according to the claimed combination.

The claims have been amended so that claim 82 indirectly depends on independent claim 68.

Porat '876, Mileski et al., Abramson et al., Porat et al. '931, and Hadari do not disclose a body unit with a main controller and a tail unit with a tail controller and being in communication with the main controller according to the claimed combination. Porat '876, Mileski et al., Abramson et al., Porat et al. '931, and Hadari do not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876, Mileski et al., Abramson et al., Porat et al. '931, and Hadari, taken alone or together, render the subject matter of claim 82 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

- V. Claim 83 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Porat (US 7,089,876), Mileski et al. (US 6,525,762), Abramson et al. (US 2003/0120389), Porat et al. '931, and Hadari (US. 2004/0260428) in view of Taninaga et al. (US 6,021,3621) as set forth on page 14 of the Official Action.***

The Examiner asserts that “[It] would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the robot type of Porat '876/Mileski

et al./Abramson et al./ Porat et al. '931/Hadari, with the robot type of Taninaga et al., because this modification would have introduced threshold value for average current, in Porat '876/Mileski et al./Abramson et al./Porat et al. '931/Hadari's teaching, thereby improving the control of the speed of the robot according to the average current detected during different cycles of the operations of the robot." This rejection is respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat '876, Mileski et al., and Abramson et al. have been discussed above in the responses set forth in paragraphs I and II above. **Porat et al. '931** has been discussed above in the response set forth in paragraph III above. **Hadari** has been discussed above in the response set forth in paragraph IV above.

Taninaga et al. disclose a load current signal from the current sensor 8 being inputted in a load signal processing unit 14 through an input unit 13. The load signal processing unit 14 calculates a position correction value and a speed correction value. See column 5, lines 63 thru column 6, line 48.

The claims have been amended so that claim 83 indirectly depends on independent claim 68.

Porat '876, Mileski et al., Abramson et al., Porat et al. '931, Hadari, and Taninaga et al. do **not** disclose a body unit with a main controller and a tail unit with a tail controller and being in communication with the main controller according to the claimed combination. Porat '876, Mileski et al., Abramson et al., Porat et al. '931, Hadari, and Taninaga et al. do not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876, Mileski et al., Abramson et al., Porat et al. '931, Hadari, and Taninaga et al., taken alone or together, render the subject matter of claim 83 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

VI. *Claims 88-91 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Porat et al. (US 6,299,699) alone as set forth on page 15 of the Official Action.*

The Examiner asserts that "it would have been obvious to one having ordinary skill in the art to perform any suitable configuration or programming to the controller of Porat '699 in order to perform the claimed invention, since has been that doing so involves on routine skill in the art." This rejection is respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat et al. '699 disclose a pool cleaner and method for its operation providing for the efficient and systematic cleaning of the bottom of a rectilinear pool or tank in a controlled geometric pattern of parallel paths transverse between a pair of opposing sidewalls. *See Abstract.*

Porat et al. '699 does **not** disclose a "robot having a memory adapted to store the orientation of the robot, and a controller being adapted to provide the robot with a command to align its orientation in accordance with the reference orientation" according to the claimed combination. Porat et al. '699 does not teach or suggest the claimed subject matter.

Thus, nothing in Porat '699 renders the subject matter of claims 88-91 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

VII. Claim 71 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Porat '876, Mileski et al., and Abramson et al. in view of Thrum et al. ("Probabilistic Algorithms and the Interactive Museum Tour-Guide Robot Minerva" – July 2000) as set forth on page 17 of the Official Action.

The Examiner asserts that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the robot type of Porat '876/Mileski et al./Abramson et al., with the robot type of Thrum et al., because this modification would have introduced battery monitoring system into Porat '876/Mileski et al./Abramson et al.'s

teaching, so that the robot can return to the charger, thereby improving the efficiency and the reliability of the cordless pool cleaning robot.” This rejection is respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should “identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. *KSR Int’l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat ‘876, Mileski et al., and Abramson et al. have been discussed above in the responses set forth in paragraphs 1 and II above.

Claim 71 has been amended to depend directly on independent claim 68.

Porat ‘876, Mileski et al., Abramson et al., and Thrum et al. do **not** disclose a body unit with a main controller and a tail unit with a tail controller and being in communication with the main controller according to the claimed combination. *Porat ‘876*,

Mileski et al., Abramson et al., and Thrum et al. do not teach or suggest the claimed subject matter.

Thus, nothing in Porat '876, Mileski et al., Abramson et al., and Thrum et al. render the subject matter of claim 71 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

VIII. Claims 92 and 93 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Porat '876 in view of Young et al. (US 7,144,057) as set forth on page 18 of the Official Action.

The Examiner asserts that "it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cleaning robot type of Porat '876, with the digital compass type of Young et al., since such a combination will provide Porat '876 the benefit of having a digital compass for orientation detection hence increasing accuracy of the system." This rejection is respectfully traversed.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person

of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Porat '876 has been discussed above in the response set forth in paragraph I above.

Young et al. disclose a digital compass. See column 3, line 4, and column 4, line 50.

The vehicle of Young et al. is a surface vehicle operating in an air environment, and not in a pool operating in a water environment. There is no suggestion to apply the digital compass of Young et al. into the pool cleaner of Porat '876 except through improper hindsight.

Thus, nothing in Porat '876 and Young et al., taken alone or together, render the subject matter of claims 92 and 93 obvious within the meaning of 35 U.S.C. §103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

CONCLUSION

Applicant believes that a full and complete response has been made to the outstanding Official Action and respectfully submits that all of the stated grounds for rejection have been overcome or rendered moot. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative at the number below to expedite prosecution.

If an extension of time is necessary to prevent abandonment of this application and is not filed herewith, then such extension of time is hereby petitioned for under 37 C.F.R. §1.136(a). Any fees required for further extensions of time and any fees for the net addition of claims are hereby authorized to be charged to our Deposit Account No. 14-0112. Prompt and favorable consideration of this reply is respectfully requested.

Respectfully submitted,
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